

Derivative Practice Worksheet

In problems 1 – 40, find the derivative of the given function. In problems 41 – 50, find dy/dx .

1. $y = 3$

2. $f(x) = -2$

3. $g(x) = x^2 + 4$

4. $h(t) = -2t^2 + 3t - 6$

5. $s(t) = t^3 - 2t + 4$

6. $y = \sin x$

7. $y = \tan x$

8. $y = \cot x$

9. $y = \cos x$

10. $y = \csc x$

11. $y = \sec x$

12. $f(x) = x^2 - \frac{1}{2}\cos x$

13. $y = 5 + \sin x$

14. $g(x) = \frac{1}{x} - 3\sin x$

15. $g(t) = \pi \cos t$

16. $h(x) = \frac{1}{3x^3}$

17. $y = \frac{\sqrt{x}}{x}$

18. $f(x) = x^3 - 3x - 2x^{-4}$

19. $y = \frac{3x-2}{2x-3}$

20. $f(x) = \frac{3-2x-x^2}{x^2-1}$

21. $g(x) = (x^2 - 2x + 1)(x^3 - 1)$

22. $y = x \cos x$

23. $f(x) = \frac{x+1}{\sqrt{x}}$

24. $f(\theta) = (\theta + 1)\cos \theta$

25. $y = x + \cot x$

26. $g(t) = \sqrt{t} + 4 \sec t$

27. $y = -\csc x - \sin x$

28. $f(x) = x^2 \tan x$

29. $f(x) = (3x - 2x^2)^3$

30. $g(x) = x^2 \sqrt{1-x^2}$

31. $h(y) = \frac{y}{\sqrt[3]{y^2+4}}$

32. $y = \left(\frac{3x-1}{x^2+3}\right)^2$

33. $y = \cos 3x^2$

34. $y = (\cos 3)x^2$

35. $y = \cos(3x)^2$

36. $y = \cos^2(3x)$

37. $f(t) = \sin^3 4t$

38. $y = \sqrt[3]{9x^2+4}$

39. $y = \frac{1}{x-2}$

40. $y = (3x^2 + 1)^4 \sqrt{3-2x}$

41. $y^3 = x$

42. $xy^2 = 5$

43. $y^3 + y^2 - 5y - x^2 = -4$

44. $x^2 + 4y^2 = 4$

45. $3(x^2 + y^2)^2 = 100xy$

46. $x^3 - xy + y^2 = 4$

47. $\sqrt{xy} = x - 2y$

48. $\sin x + 2 \cos 2y = 1$

49. $x^{2/3} + y^{2/3} = 5$

50. $\tan(x+y) = x$